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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/620,888	07/21/2000	Steven T. Barham	528-008605-US (PAR)	4779
2512	7590	02/03/2006	EXAMINER	
PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			PHU, PHUONG M	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/620,888

Applicant(s)

BARHAM ET AL.

Examiner

Phuong Phu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-7,11,13,14 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,11,13,14 and 16-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This Office Action is responsive to the Amendment filed on 11/25/05.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 6, 7, 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Ito (6,542,471), previously-cited.

-Regarding to claim 6, see figures 1, 3, 4 and 5, and col. 6, line 14 to col. 7, line 67, col. 9, line 4 to col. 14, line 31, Ito discloses a system wherein the system (see figure 1) comprises:

a first transceiver (3, 7, 9, 13, 11);

a first multi-rate code generator (5) connected to the first transceiver for generating a first coded signal (REQUEST FOR CHANGE OF DATA COMMUNICATION TO HIGH SPEED)

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(see (S20) of figure 3) having a first code rate "chip rate" (see col. 6, lines 53-63, col. 6, lines 53-63, col. 9, lines 24-40, col. 11, lines 16-20);

a second transceiver (56, 52, 62, 58) responsive to the first transceiver for receiving said first coded signal at said first code rate;

a second multi-rate code generator (64) connected to the second transceiver; and  
control circuits (66, 70, 68, 72) for changing, at said first and second transceivers, to a second code sequence having a second code rate is higher than said first code rate (see figures 1 and 5, and col. 11, line 20 to col. 12, line 64).

-Regarding to claims 7 and 11, Ito discloses that the first and second multi-rate code generators are dual rate PN code generators for generating the first and second code sequences comprises PN code sequence (see PN CODE 11 AND PN CODE 12 of figure 5).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito in view of Hayakawa (6,738,412), newly-cited.

-Regarding to claim 1, see figures 1, 3, 4 and 5, and col. 6, line 14 to col. 7, line 67, col. 9, line 4 to col. 14, line 31, Ito discloses a method wherein the method (see figure 1) comprises:

step (62, 58) of acquiring a signal (REQUEST FOR CHANGE OF DATA  
COMMUNICATION TO HIGH SPEED) (see (S20) of figure 3) having a first code rate "chip

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rate” from a first transceiver (1) at a second transceiver (50) (see col. 6, lines 53-63, col. 9, lines 24-40, col. 11, lines 16-20);

step (58) of correlating the signal with a first code sequence having a first code rate, in the acquisition for acquiring the signal (see col. col. 9, lines 24-40);

step (56) of transmitting, based on outputs of means (66) in response to the correlating the signal with said first code sequence (see figure 1, col. 11, lines 15-38) , an acknowledgement (DATA COMMUNICATION SPEED CHANGE REQUEST RESPONSE SIGNAL) (see (S24) of figure 3) from said second transceiver to said first transceiver (see col. 12, lines 13-16); and

step (5, 15, 54, 64) of changing, at said first and second transceiver, in response to the correlating the signal with the first code sequence, to a second code sequence having a second code rate that is higher than said first code rate (see figure 5, and col. 12, line 35 to col. 14, line 31).

Ito does not disclose step of achieving a timing clock as said first code rate, as claimed.

Hayakawa teaches step (34) of achieving a timing clock as a code rate “chip rate” for a correlating process (31) of correlating a received signal (outputted from means (33) with said code rate (see figure 1, and col. 12, lines 16-30).

Since Ito does not disclose in detail how the timing/clocking in step (58) of correlating the signal is, it would have been obvious for one skilled in the art to implement Ito with step of achieving a timing clock as said first code rate for the correlating process (58), as taught by Hayakawa, so that the correlating process (58) would be provided with said timing clock as said first code rate in order to carry out correlating the signal with a first code sequence having said first code rate, as required.

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-Regarding to claim 2, Ito discloses that the first and second code sequences comprises PN code sequence (see PN CODE 11 AND PN CODE 12 of figure 5).

-Regarding to claim 4, Ito discloses (see figure 1):  
step (58, 66, 68, 72) of tracking the first code sequence in the receiver of the second transceiver;  
step (54) of changing the first code sequence of a first code generator of the transmitter of the second transceiver to the second code sequence; and  
step (64) of changing the first code sequence of a second code generator of the receiver of the second transceiver to the second sequence.

-Regarding to claim 5, Ito discloses that changing the first code sequence to the second code sequence in said first and second transceivers is in response to the occurrence of a predetermined event (T4) (see figure 5).

5. Claims 13, 14, 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito, in view of Hayakawa, and further in view of Howell et al (5,969,894), newly-cited.

-Regarding to claim 13, as similarly applied to claim 1, see figures 1, 3, 4 and 5, and col. 6, line 14 to col. 7, line 67, col. 9, line 4 to col. 14, line 31, Ito discloses a method wherein the method (see figure 1) comprises:

step (3, 7, 9) of transmitting a first coded signal (REQUEST FOR CHANGE OF DATA COMMUNICATION TO HIGH SPEED) (see (S20) of figure 3) having a first code rate from a transmitter system;

step (62, 58) of receiving and acquiring the first coded signal on a receiver system;

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step (58) of correlating the first coded signal with a first code sequence having a first code rate, in the acquisition for acquiring the signal; and

step (58, 70) of calculating a probability of detection "error occurrence rate" being detected for the received first coded signal (see col. 9, line 63 to col. 10, line 11).

Ito does not disclose step of achieving a timing clock as said first code rate, as claimed.

Hayakawa teaches step (34) of achieving a timing clock as a code rate "chip rate" for a correlating process (31) of correlating a received signal (outputted from means (33) with said code rate (see figure 1, and col. 12, lines 16-30).

Since Ito does not disclose in detail how the timing/clocking in step (58) of correlating the signal is, it would have been obvious for one skilled in the art to implement Ito with step of achieving a timing clock as said first code rate for the correlating process (58), as taught by Hayakawa, so that the correlating process (58) would be provided with said timing clock as said first code rate in order to carry out correlating the signal with a first code sequence having said first code rate, as required.

Ito in view of Hayakawa does not disclose step of changing the first coded signal to a second coded signal having a second code rate that is higher than said first rate, in response to the probability of detection of the first coded signal exceeding a predetermined amount.

However, Ito discloses that the calculated probability of detection of the first coded signal is an error occurrence rate, and Ito discloses step of changing the first coded signal to a second coded signal having a second code rate that is higher than said first rate, in response to the probability of detection of the first coded signal lower than a first predetermined amount (see col. 9, line 63 to col. 10, line 25).

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On the other hand, it is well-recognized in the art that signal to noise ratio (SNR) of a received signal being received at a receiver is also a value indicating the detection of the received signal at the receiver, wherein the SNR has an inverted relationship with an error occurrence rate (e.g., BER) which indicates the error detection of the received signal at the receiver. For instance, Howell et al teaches a SNR has an inverted relationship with an error occurrence rate (BER) (see figure 2, and col. 2, lines 17-20).

It would have been obvious for one skilled in the art, when building or carrying out Ito invention in view of Hayakawa, within his skills and upon his design preference, in an alternative way, to implement Ito in such a way that the calculated probability of detection of the first coded signal is SNR, and that the step of changing the first coded signal to a second coded signal having a second code rate higher than said first rate is in response to SNR higher than a second predetermined amount (which would have an inverted relationship with said first predetermined amount).

-Claim 14 is rejected with similar reasons set forth for claim 2.

-Regarding to claim 16, Ito discloses (see figures 1 and 5):

step (66, 68) (see figure 1) of waiting a predetermined amount of time (e.g.,  $T_3 - T_1$ ) (see figure 5);

step (66, 68) of changing a first PN code of the receiver system to a second PN code after the predetermined amount of time has elapsed; and

step (66, 68) of changing a second PN code of the transmitter system to a second PN code after the predetermined amount of time has elapsed.



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-Regarding to claim 17, Ito discloses that the changing of the first and second codes occurs contemporaneously (see figure 5).

-Claim 18 is rejected with similar reasons set forth for claim 13.

***Response to Arguments***

6. Applicant's arguments filed on 11/25/05 have been fully considered.

-Applicant's arguments with respect to claims 1 and 13 have been considered but are moot in view of the new ground(s) of rejection.

-Applicant's arguments with respect to claim 6 is not persuasive. Note that the rejection to the claim is based on the limitations given in the claim, and considered being anticipated by Ito with reasons set forth above in this Office Action. Since the applicant did not point out which particular limitation(s) of claim 6 that Ito does not disclose, the applicant is hereby requested to point said particular limitation(s) that Ito does not disclose or teach.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (6:30-2:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**PHUONG PHU**  
**PRIMARY EXAMINER**

*Phuong phu*  
Phuong Phu  
1/19/06

Phuong Phu  
Primary Examiner  
Art Unit 2631